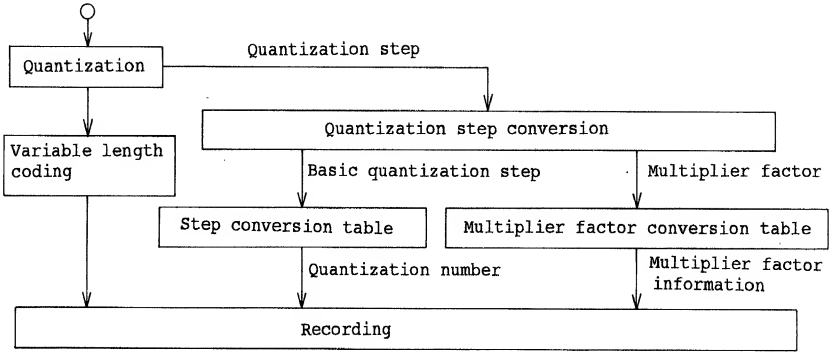
Fig. 1


Quantization
Quantization step
Quantization step conversion
Variable length coding
Basic quantization step
Multiplier factor
Step conversion table
Multiplier factor conversion table
Quantization number
Multiplier factor information
Recording

TOSTEO 28STTB60

Fig. 2

Quantization step	1	2	3	4	5	6	7	8	10	12	14	16	18	20	22	24
Basic quantization step	1	2	3	4	5	6	7	8	5	6	7	16	18	20	22	24
Multiplier factor	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1

Quantization step	28	32	36	40	44	48	52	56	64	72	80	88	96	104	112
Basic quantization step	28	16	18	20	22	24	52	28	16	18	20	22	24	52	28
Multiplier factor	1	2	2	2	2	2	1	2	4	4	4	4	4	2	4

Fig. 3

Basic quantization step	1	2	3	4	5	6	7	8	16	18	20	22	24	28	52
Quantization number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Fig. 4

Multiplier factor	1	2	4
Multiplier factor information	0	1	2

Fig. 5

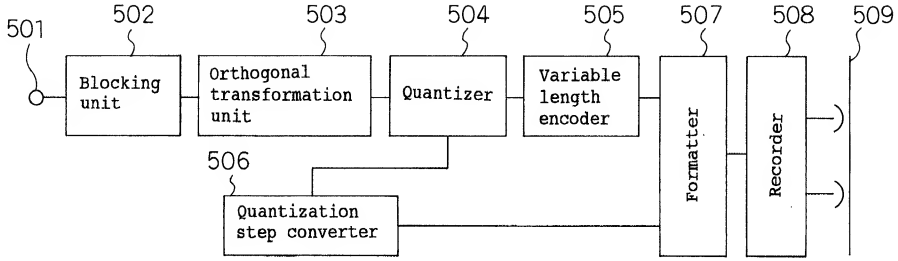
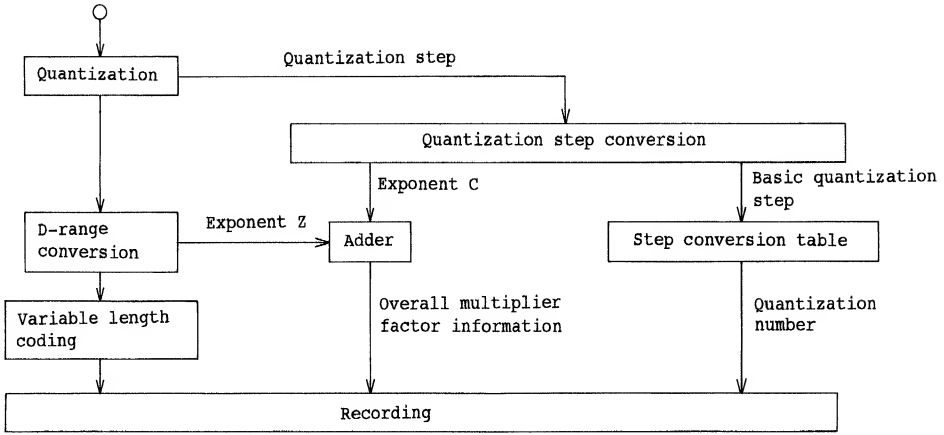

501
502
503
504
505
507
508
509
Blocking unit
Orthogonal transformation unit
Quantizer
Variable length encoder
Formatter
Recorder
506
Quantization step converter

Fig. 6


Quantization
Quantization step
Quantization step conversion
Exponent C
Basic quantization step
D-range conversion
Exponent Z
Adder
Step conversion table
Variable length coding
Overall multiplier factor information
Quantization number
Recording

TOSTED 28911860

Fig. 7 (a)

Input signal (12 bits) : s b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1

Fig. 7 (b)

D-range	Output signal (9 bits)	Multiplier factor
0 ~ 255	s b8 b7 b6 b5 b4 b3 b2 b1	2^0
256 ~ 511	s b9 b8 b7 b6 b5 b4 b3 b2	2^1
512 ~1023	s b10 b9 b8 b7 b6 b5 b4 b3	2^2
1024 ~ 2047	s b11 b10 b9 b8 b7 b6 b5 b4	2^3

Fig. 8

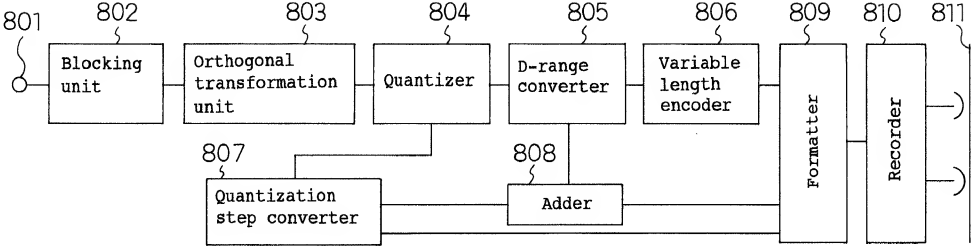

801
802
Blocking unit
803
Orthogonal transformation unit
804
Quantizer
805
D-range converter
806
Variable length encoder
809
Formatter
810
Recorder
811
807
Quantization step converter
808
Adder

Fig. 9

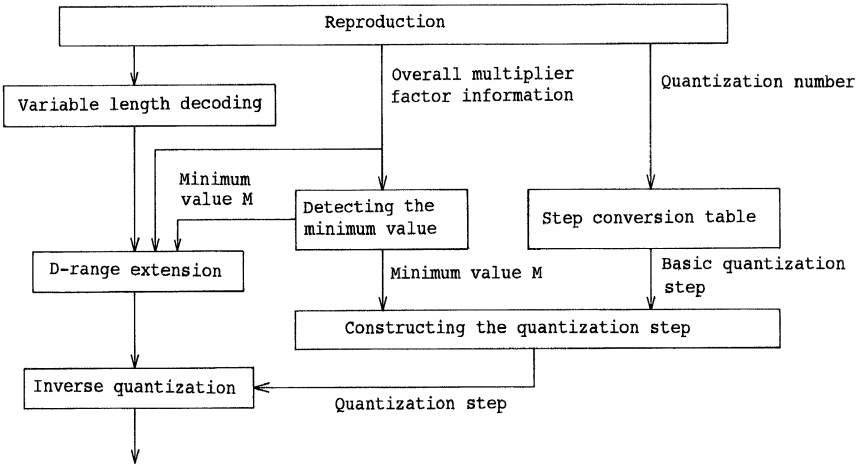
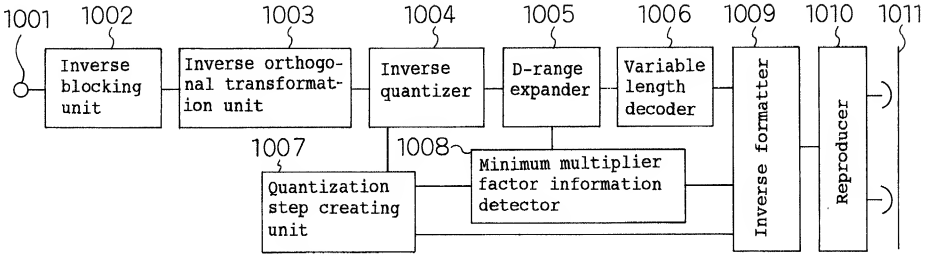

Reproduction
Variable length decoding
Overall multiplier factor information
Quantization number
Minimum value M
Detecting the minimum value
Step conversion table
D-range extension
Minimum value M
Basic quantization step
Constructing the quantization step
Inverse quantization
Quantization step

Fig. 10


1001
1002
1003
1004
1005
1006
1009
1010
1011
Inverse blocking unit
Inverse orthogonal transformation unit
Inverse quantizer
D-range expander
Variable length decoder
Inverse formatter
Reproducer
1007
1008
Quantization step creating unit
Minimum multiplier factor information detector